

IN THE CLAIMS

1-14. (canceled)

15. (currently amended) A method for isolating DNA from plant tissue comprising:
combining a sample of plant tissue with a mixture of cell wall degrading enzymes
isolated from a TW-1 mutant strain of *Trichoderma longibrachiatum*, and
incubating said plant tissue and said mixture of cell wall degrading enzymes;
wherein the tissue sample is from a plant selected from the group
consisting of Acer campestre, Aesculus hippocastanum, Allium ampeloprasum, Allium
fistulosum, Allium porrum, Alnus sp., Anethum graveolens, Anthericum liliago,
Arabidopsis thaliana, Aristolochia macrophylla, Asparagus officinalis, Asplenium
scolopendrium, Astragalus gummifer, Atropa belladonna, Begonia sp., Beta vulgaris,
Betula sp., Bletilla striata, Bombax sp., Brassica oleracea, Brunnera macrophylla, Buxus
sempervirens, Camellia sinensis, Caprinus sp., Caragana sophoriflora, Cardamine
heptaphylla, Carex morrowii, Centaurea macrocephala, Cercidiphyllum japonicum,
Chamaedorea microspadix, Clematis sp., Coffea arabica, Colchicum speciosum, Crocus
albiflorus, Cyclamen purpurascens, Cymbidium pendulum, Danae recemosa, Daphne
ponica, Dendrobium moschatrum, Dietes bicolor, Dipterracanthus devosianus,
Epimedium alpinum, Eranthis hyemalis, Eryngium planum, Euonymus bungeana,
Euphorbia leuconeura, Euphorbia rigida, Fragaria sp., Frenaria aurea, Fumaria
capreolata, Gadiodius palustris, Geranium sp., Gloxinia sp., Glycine max, Gossypium
sp., Hedera helix, Helleborus dumetorum, Helleborus odoratus, Hibiscus magnifica,
Humulus lupulus, Hycintus orientalis, Hypoestes sp., Ilex aquifolium, Impatiens sodenii,
Inula ensifolia, Lactuca sativa, Lathyrus vernus, Lilium henryi, Lilium pumilum, Liriope
spicata, Lonicera caerulea, Lupinus sp., Lycopersicon esculentum, Mentha piperita,
Narcissus pseudonarcissus, Nicotiana tabacum, Nymphaea sp., Oreopanax sp., Oryza
sativa, Paeonia belladonna, Paeonia suffruticosa, Palisota mannii, Papaya sp., Peperomia
sp., Petasites albus, Phlomis fruticosa, Piper sp., Polygonum chinensis, Polygonum
multiflorum, Primula pubescens, Primula vulgaris, Psychotria guadeloupensis, Rheum
palmatum, Ribes petraeum, Rohdea japonica, Saintpaulia magungensis, Salvia
officinalis, Saponaria officinale, Scilla bifolia, Setaria italica, Siningia sp., Sinningia
magnifica, Sison amomum, Skimmia sp., Solanum tuberosum, Sorbus aria, Stachyfarpetia

sp., Tilia sp., Tricantha affilifera, Triticum aestivum (seed), Triticum spelta , Triticum turgidum, Tulipa sp., Uniola latifolia, Urtica dioica, Vanhoutea sp., Veratrum album, Viburnum carlesii, Vitis vinifera, Weigelia floribunda, Weigelia precox, and Zea mais.

16. (original) The method of claim 15, wherein said enzymes of said mixture are produced recombinantly.

17-20. (canceled)

21. (previously presented) The method of claim 15, wherein said enzymes comprise a carbohydrase.

22. (previously presented) The method of claim 15, wherein said mixture comprises a cellulase, a β -glucanase, a mannanase, a xyloglucanase, a pectinase, a glycosidase and a xylanase.

23. (previously presented) The method of claim 15, wherein said mixture comprises at least one of a cellulase, a β -glucanase, a mannanase, a xyloglucanase, a pectinase, a glycosidase and a xylanase.

24. (original) The method of claim 15, wherein said incubation is performed in the presence of a digestion buffer comprising a DNA preserving agent.

25 (original) The method of claim 24, wherein said DNA preserving agent is EDTA.

26. (original) The method of claim 24 wherein said digestion buffer further comprises at least one of a non-ionic detergent and PEG.

27. (original) The method of claim 26, wherein said detergent is Triton-X-100.

28. (original) The method of claim 24, wherein said buffer has a pH of 5.0.

29. (original) The method of claim 15, wherein said incubation is performed at 50°C.

30. (original) The method of claim 15, wherein said combination of said mixture of cell wall degrading enzymes and said sample are agitated at 250 rpm for 1-16 hours.

31. (original) The method of claim 15, further comprising the steps of adding a DNA-binding solid support and binding said DNA to said solid support after said incubation step.

32. (original) The method of claim 15, wherein said method is automated.

33-49. **(canceled)**

50. (previously presented) The method of claim 15, wherein the mixture comprises a cellulase, β -glucanase, a xylanase, a mannanase, a xyloglucanase, a pectinase, a β -glucosidase, a β -xylosidase, an α -L-arabinofuranosidase, and an α -galactosidase; and wherein the mixture has: cellulase activity of 250 to 50,000 U/ml; β -glucanase activity of 240 to 48,000 U/mL; xylanase activity of 40 to 18,000 U/mL; mannanase activity of 5 to 1000 U/mL; xyloglucanase activity of 25 to 5000 U/mL; pectinase activity of 15 to 3000 U/mL; β -glucosidase activity of 2.5 to 500 U/mL; β -xylosidase activity of 0.5 to 100 U/mL; α -L-arabinofuranosidase activity of 2.5 to 500 U/mL; and α -galactosidase activity of 0.5 to 100 U/mL.

51. (previously presented) The method of claim 50, wherein the mixture has: cellulase activity of 2500 to 5000 U/ml; β -glucanase activity of 2400 to 4800 U/mL; xylanase activity of 400 to 1800 U/mL; mannanase activity of 50 to 100 U/mL; xyloglucanase activity of 250 to 500 U/mL; pectinase activity of 150 to 300 U/mL; β -glucosidase activity of 25 to 50 U/mL; β -xylosidase activity of 5 to 10 U/mL; α -L-arabinofuranosidase activity of 25 to 50 U/mL; and α -galactosidase activity of 5 to 10 U/mL.

52-53. **(canceled)**